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(54) **SECURE WIRELESS COMMUNICATION PLATFORM**

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(58) **Field of Classification Search**
None
See application file for complete search history.

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(57) **ABSTRACT**

Vital sign data is communicated from one or more Bluetooth vital sign measuring devices (BVSMD) to one or more gateways located within an environment. At least one of the gateways communicates the vital sign data to an endpoint, that may include electronic health records, via a wide area network (WAN). The gateways communicate among themselves using one or more of a plurality of protocols, such as LoRa, WiFi, cellular, ethernet or direct IP. Each gateway may be capable of forming a mesh network with other gateways. Each gateway may also share a Bluetooth bonding key with another gateway, so as to allow BVSMD's to communicate with other gateways without individually pairing each BVSMD to the other gateways. The BVSMD's may be Bluetooth Low Energy (BLE) devices. Each gateway may be capable of periodically generating a random access address that is mapped with a BVSMD MAC address. The access address is used for communication between the BVSMD and the gateway for enhanced security.

19 Claims, 9 Drawing Sheets